

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Claim 1 (currently amended). A method for sharing a storage device among a plurality of computers while providing data integrity in the storage device, the method comprising the steps of:

registering a particular one of the plurality of computers with the storage device by storing in the storage device a first computer identifier associated with a reserved access type in the storage device;

detecting a failure of the registered computer; and

in response to detection of the failure, performing steps of:

de-registering the registered computer with the storage device; and

re-registering the registered computer with the storage device by storing in the storage device a second computer identifier that differs from the first computer identifier~~upon loss of a knowledge of the stored identifier in the shared storage device by the registered computer, replacing the identifier for the registered computer storage in the shared~~

~~storage device with a new identifier for the registered
computer.~~

Claim 2 (original). The method as claimed in Claim 1 wherein
the registered computer is a currently registered computer.

Claim 3 (original). The method as claimed in Claim 1 wherein
the registered computer is a previously registered computer.

Claim 4 (currently amended). An apparatus for sharing a storage device among a plurality of computers while providing data integrity in the storage device, the apparatus comprising:

a register routine which;

registers a computer with a storage device by storing in the storage device a first computer identifier associated with a reserved access type in the storage device; ~~and~~

~~upon detection of loss of knowledge of the stored computer identifier in the shared device by a failure of the registered computer;~~

de-registers the registered computer with the storage device; and

re-registers the registered computer with the storage device by storing in the storage device a second computer identifier that differs from the first computer identifier. ~~replaces the identifier for the registered computer stored in the shared storage device with a new identifier for the registered computer.~~

Claim 5 (original). An apparatus as claimed in Claim 4 wherein the registered computer is a currently registered computer.

Claim 6 (original). An apparatus as claimed in Claim 4 wherein the registered computer is a previously registered computer.

Claim 7 (currently amended). An apparatus for sharing a storage device among a plurality of computers while providing data integrity in the storage device, the apparatus comprising:

means for registering a particular one of the plurality of computers with a shared storage device by storing in the storage device a first identifier associated with a reserved access type for the shared storage device;~~and~~

~~means for upon detecting~~a failure of loss of knowledge of the stored identifier in the shared device by the registered computer;

means, responsive to the means for detecting the failure, comprising:

means for de-registering the registered computer with the storage device; and

means for re-registering the registered computer with the storage device by storing in the storage device a second computer identifier that differs from the first computer identifier;~~means for replacing the identifier for the registered computer stored in the shared storage device with a new identifier for the registered computer.~~

Claim 8 (original). An apparatus as claimed in Claim 7 wherein the registered computer is a currently registered computer.

Claim 9 (original). An apparatus as claimed in Claim 7 wherein the registered computer is a previously registered computer.

Claim 10 (original). An apparatus as claimed in Claim 7 wherein the identifier for each computer is unique.

Claim 11 (currently amended). A computer system comprising:

a central processing unit connected to a memory bus by a system bus;

an I/O system, connected to the system bus by a bus interface;
and

a routine for providing data integrity in a storage device shared by the computer system with another computer system, the routine:

registering the computer system with the shared storage device by storing in the storage device a first identifier associated with a reserved access type for the shared storage device; ~~and~~

~~detecting a failure of upon loss of a knowledge of the stored identifier in the shared storage device by the registered computer system; and~~

in response to detection of the failure:

de-registering the computer system with the storage device; and

re-registering the computer system with the storage
device by storing in the storage device a second computer
identifier that differs from the first computer identifier,
~~replacing the identifier for the registered computer stored in~~
~~the shared storage device with a new identifier for the~~
~~registered computer.~~

Claim 12 (currently amended). A computer program product for providing data integrity in a storage device shared by a plurality of computers, the computer program product comprising a computer usable medium having computer readable program code thereon, including program code which:

registers a particular one of the plurality of computers with the shared storage device by storing in the storage device ~~a~~ first identifier associated with a reserved access type for the shared storage device; and

~~upon loss of a knowledge of the stored identifier in the shared storage device by~~ detection of a failure of the registered computer;

de-registers the registered computer with the storage device; and

re-registers the registered computer with the storage device by storing in the storage device a second computer identifier that differs from the first computer identifier;
~~replaces the identifier for the registered computer stored in the shared storage device with a new identifier for the registered computer.~~